

Notice of Allowability

Application No.

10/064,500

Examiner

Quang T Van

Applicant(s)

BARMATZ ET AL.

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 4/22/2004.
2. ☒ The allowed claim(s) is/are 1-35.
3. ☒ The drawings filed on 22 July 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Quang T Van
Primary Examiner
Art Unit: 3742

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Bing Ai (Reg. No. 43,312) on July 2, 2004.

The application has been amended as follows:

In claim 24, at line 11, after wherein, insert -- said first and said second surfaces each includes a metal, --

In claim 26, at line 11, after wherein, insert -- said first and said second surfaces each includes a metal, --

REASON FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: allowance of claims 1-35 is indicated because the prior art of record does not show or suggest placing a first substrate with a first metal surface part that has better microwave absorption than said first substrate, against a second substrate with a second metal surface part that has better microwave absorption than said second substrate and applying microwave energy to the first and second surface parts to bond the first substrate to the second substrate as recited in claims 1, 7-8, 21, 23, 25; placing a first substrate with a first surface part that has better microwave absorption than said first

Art Unit: 3742

substrate, against a second substrate with a second surface part that has better microwave absorption than said second substrate, applying microwave energy to the first and second surface parts to bond the first substrate to the second substrate, wherein the first substrate is placed on top of the second substrate and is held only by gravity during bonding as recited in claims 2, 5, 6, 9-10; placing a first substrate with a first surface part that has better microwave absorption than said first substrate, against a second substrate with a second surface part that has better microwave absorption than said second substrate, applying microwave energy to the first and second surface parts to bond the first substrate to the second substrate, wherein said bonding includes hermetically sealing a cavity as recited in claims 3-4; placing a first substrate of a first material, having a first area defined within a perimeter of a second material, against a second substrate, of the third material, said second substrate also having a second area defined within a perimeter of a fourth material, and wherein said first and third materials are poorer absorbers of microwaves than said second and fourth materials and the step of applying microwaves to an area of said first substrate and said second substrate to bond said second material to said fourth material as recited in claims 11-20; placing a first substrate with a first surface part that has better microwave absorption than said first substrate, against a second substrate with a second surface part that has better microwave absorption than said second substrate, said first and second surfaces coupled together to define an area of connection therebetween, wherein said material of said first substrate is semiconductor material as recited in claim 22; placing a first substrate with a first surface part that has better microwave absorption than said first

substrate, against a second substrate with a second surface part that has better microwave absorption than said second substrate, said first and second surfaces coupled together to define an area of connection therebetween, wherein said first and said second surfaces each includes a metal, said metal has a thickness within an order of magnitude of the skin depth of the first and second surfaces as recited in claim 24; placing a first substrate with a first surface part that has better microwave absorption than said first substrate, against a second substrate with a second surface part that has better microwave absorption than said second substrate, said first and second surfaces coupled together to define an area of connection, wherein said area of connection forms a closed perimeter, which defines a hermetically sealed chamber as recited in claims 26-27; and the step of bringing a first semiconductor substrate with a first metal film into contact with a second semiconductor substrate with a second metal film, where both of said first and second metal films are less than an order of magnitude thicker than the skin depth of the metal as recited in claims 28-34.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



QV
July 2, 2004



Quang T Van
Primary Examiner
Art Unit 3742